Butterfly.—This species may be distinguished from *T. pacumus*, a near ally, by the more mottled surface of the secondaries, which in *pacummare* almost solidly black; and from *T. martialis*, another close ally, by the absence of the purplish-gray cast peculiar to both sides of the wings of the latter species, and the less regular arrangement of the bands of spots on the upper side of the fore wings. The plate does not show these delicate but constant marks of difference as well as might be desired. Expanse, 1.20-1.40 inch.

Early Stages.—Dr. Scudder has fully described these. The caterpillar feeds on the columbine *(Aquilegia canadensis).*

Lucilius ranges from New England to Georgia, is common in western Pennsylvania and West Virginia, and extends westward at least as far as the Rocky Mountains.

(5) Thanaos persius, Scudder, Plate XLV1II, Fig. i, 3; Plate VI, Fig. 34, *chrysalis* (Persius' Dusky-wing).

Butterfly.—*This* is a very variable species, some specimens being light and others dark in color. There is scarcely any positive clue to the specific identity of the insect except that which is derived from the study of the genital armature of the male, which is a microscopic research capable of being performed only by an expert in such matters. The student may be pardoned if, in attempting to classify the species of this genus, and the present species in particular, he should grow weary, and quote a few biblical expressions relating to Beelzebub, the " god of flies." Expanse, 1.20-1.45 inch.

Early Stages.—The caterpillar feeds on willows. Scudder has with patient care described its life-history.

The insect ranges from New England southward, and inland across the continent to the Pacific.

(6) Thanaos afranius, Lintner, Plate XLV, Fig. 5, $ (Afranius' Dusky-wing).

Butterfly.—*Closely* related to the preceding species. The hind wings on the upper side in the male sex are

almost solid black, the fringes paler. On the under side there is a double row of light spots along the margin of the hind wing in both sexes. The female is generally paler in color on the upper side than the male.

Early Stages.—Unknown.

All the specimens I have seen come from Arizona, where the thing is apparently common*